



Department of Utilities
Engineering Services Division

CITY OF SACRAMENTO
CALIFORNIA

1395 35th Avenue
Sacramento, CA 95822-2911
phone (916) 264-1400
fax (916) 264-1497/1498

May 10, 2000

CALFED Bay-Delta Program Office
1416 - 9th Street, Suite 1155
Sacramento, CA 95814

Attention: Rebecca Fawver

Subject: City of Sacramento Water Intake Fish Screen Replacement
2001 CALFED Proposal

Dear Ms Fawver:

The City of Sacramento is pleased to submit this proposal for a fish screen replacement project at the City's water intakes for the Sacramento River and E A Fairbairn water treatment plants. The construction of the fish screen replacement project will meet a CALFED goal of reducing entrainment of juvenile chinook salmon, steelhead trout, Sacramento splittail, and green sturgeon. The replacement screens will provide long term fisheries benefits.

Thank you for your consideration of the City's proposal and we look forward to your response.

Sincerely,

Gary E Gosse
Supervising Engineer

Enclosure



CITY OF SACRAMENTO
DEPARTMENT
OF UTILITIES

Making a Difference in Your Neighborhood



Department of Utilities
Engineering Services Division

CITY OF SACRAMENTO
CALIFORNIA

1395 35th Avenue
Sacramento, CA 95822-2911
phone (916) 264-1400
fax (916) 264-1497/1-498

May 10, 2000

Mr Fred Buderer, Senior Planner
City of Sacramento
Neighborhoods, Planning, and Development Services Department
Environmental Affairs
1231 I Street, Suite 300
Sacramento, CA 95814

SUBJECT: INTAKE FISH SCREEN REPLACEMENT PROJECT

Dear Fred:

Enclosed for your information is a copy of a proposal being submitted to CALFED for partial funding of construction of the Sacramento River WTP Replacement Intake project (PN:ZF56) and the E A Fairbairn WTP Intake Modification project (PN:ZF46).

Sincerely,

Gary E Gosse,
Supervising Engineer

Enclosure



CITY OF SACRAMENTO
DEPARTMENT
OF UTILITIES

Making a Difference in Your Neighborhood

Proposal # 2001- <u>6200</u> (Office Use Only)
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PSP Cover Sheet (Attach to the front of each proposal)

Proposal Title: City of Sacramento Intake Fish Screen Replacement Project (Const.)
 Applicant Name: City of Sacramento, Department of Utilities
 Contact Name: Gary E. Gosse, Project Manager
 Mailing Address: 1395 35th Avenue, Sacramento CA 95822
 Telephone: (916) 264-1426
 Fax: (916) 264-1497
 Email: ggosse@gw.cityofsacramento.org

Amount of funding requested: \$ 6,020,995

Some entities charge different costs dependent on the source of the funds. If it is different for state or federal funds list below.

State cost _____

Federal cost _____

Cost share partners?

____ Yes ☒ No

Identify partners and amount contributed by each _____

Indicate the Topic for which you are applying (check only one box).

- | | |
|--|--|
| <input type="checkbox"/> Natural Flow Regimes | <input type="checkbox"/> Beyond the Riparian Corridor |
| <input type="checkbox"/> Nonnative Invasive Species | <input type="checkbox"/> Local Watershed Stewardship |
| <input type="checkbox"/> Channel Dynamics/Sediment Transport | <input type="checkbox"/> Environmental Education |
| <input type="checkbox"/> Flood Management | <input type="checkbox"/> Special Status Species Surveys and Studies |
| <input type="checkbox"/> Shallow Water Tidal/ Marsh Habitat | <input type="checkbox"/> Fishery Monitoring, Assessment and Research |
| <input type="checkbox"/> Contaminants | <input checked="" type="checkbox"/> Fish Screens |

What county or counties is the project located in? Sacramento

What CALFED ecozone is the project located in? See attached list and indicate number. Be as specific as possible 3.5 Sacramento River (Verona to Sacramento)

Indicate the type of applicant (check only one box):

- | | |
|---|---|
| <input type="checkbox"/> State agency | <input type="checkbox"/> Federal agency |
| <input type="checkbox"/> Public/Non-profit joint venture | <input type="checkbox"/> Non-profit |
| <input checked="" type="checkbox"/> Local government/district | <input type="checkbox"/> Tribes |
| <input type="checkbox"/> University | <input type="checkbox"/> Private party |
| <input type="checkbox"/> Other: _____ | |

Indicate the primary species which the proposal addresses (check all that apply):

- | | |
|--|---|
| <input type="checkbox"/> San Joaquin and East-side Delta tributaries fall-run chinook salmon | <input checked="" type="checkbox"/> Spring-run chinook salmon |
| <input checked="" type="checkbox"/> Winter-run chinook salmon | <input checked="" type="checkbox"/> Fall-run chinook salmon |
| <input checked="" type="checkbox"/> Late-fall run chinook salmon | <input type="checkbox"/> Longfin smelt |
| <input checked="" type="checkbox"/> Delta smelt | <input checked="" type="checkbox"/> Steelhead trout |
| <input checked="" type="checkbox"/> Splittail | <input type="checkbox"/> Striped bass |
| <input checked="" type="checkbox"/> Green sturgeon | <input type="checkbox"/> All chinook species |
| <input type="checkbox"/> White Sturgeon | <input type="checkbox"/> All anadromous salmonids |
| <input type="checkbox"/> Waterfowl and Shorebirds | <input type="checkbox"/> American shad |
| <input type="checkbox"/> Migratory birds | |
| <input type="checkbox"/> Other listed T/E species: _____ | |

Indicate the type of project (check only one box):

- | | |
|---|---|
| <input type="checkbox"/> Research/Monitoring | <input type="checkbox"/> Watershed Planning |
| <input type="checkbox"/> Pilot/Demo Project | <input type="checkbox"/> Education |
| <input checked="" type="checkbox"/> Full-scale Implementation | |

Is this a next-phase of an ongoing project?

Yes X

No _____

Have you received funding from CALFED before?

Yes X

No _____

If yes, list project title and CALFED number City of Sacramento Fish Screen Replacement

Project (Phase 2) - 98-B1016

Have you received funding from CVPIA before?

Yes X

No _____

If yes, list CVPIA program providing funding, project title and CVPIA number (if applicable):

Anadromous Fish Screen Program, Development of Positive Barrier Fish Screen Designs for Installation in the Sacramento and American Rivers

(Grant Agreement No. 7-FG-20-14960)

By signing below, the applicant declares the following:

- The truthfulness of all representations in their proposal;
- The individual signing the form is entitled to submit the application on behalf of the applicant (if the applicant is an entity or organization); and
- The person submitting the application has read and understood the conflict of interest and confidentiality discussion in the PSP (Section 2.4) and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent as provided in the Section.

Gary E Gosse

Printed name of applicant

Gary E Gosse

Signature of applicant

Environmental Compliance Checklist

All applicants must fill out this Environmental Compliance Checklist. Applications must contain answers to the following questions to be responsive and to be considered for funding. Failure to answer these questions and include them with the application will result in the application being considered nonresponsive and not considered for funding.

1. Do any of the actions included in the proposal require compliance with either the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), or both?

 X
YES

NO

2. If you answered yes to # 1, identify the lead governmental agency for CEQA/NEPA compliance.

Bureau of Reclamation (NEPA) and City of Sacramento (CEQA)
Lead Agency

3. If you answered no to # 1, explain why CEQA/NEPA compliance is not required for the actions in the proposal.

4. If CEQA/NEPA compliance is required, describe how the project will comply with either or both of these laws. Describe where the project is in the compliance process and the expected date of completion.

A draft Environmental Assessment with both the City of Sacramento and the U.S. Department of the Interior, Bureau of Reclamation as lead agencies was circulated for public review between February 12, 1999 and March 12, 1999.

5. Will the applicant require access across public or private property that the applicant does not own to accomplish the activities in the proposal?

 X
YES

NO

If yes, the applicant must attach written permission for access from the relevant property owner(s). Failure to include written permission for access may result in disqualification of the proposal during the review process. Research and monitoring field projects for which specific field locations have not been identified will be required to provide access needs and permission for access with 30 days of notification of approval.

City of Sacramento is in process of negotiating with the California Department of Water Resources for permanent rights to 1.1 acres of state owned property at the Sacramento River WTP Replacement Intake site.

6. Please indicate what permits or other approvals may be required for the activities contained in your proposal. Check all boxes that apply.

LOCAL

Conditional use permit	_____
Variance	_____
Subdivision Map Act approval	_____
Grading permit	_____
General plan amendment	_____
Specific plan approval	_____
Rezone	_____
Williamson Act Contract cancellation	_____
Other _____ (please specify)	
None required	<u> X </u>

STATE

CESA Compliance	<u> X </u>	(CDFG)
Streambed alteration permit	<u> X </u>	(CDFG)
CWA § 401 certification	<u> X </u>	(RWQCB)
Coastal development permit	_____	(Coastal Commission/BCDC)
Reclamation Board approval	<u> X </u>	
Notification	_____	(DPC, BCDC)
Other <u>Caltrans</u> (please specify)		
None required	_____	

FEDERAL

ESA Consultation	<u> X </u>	(USFWS)
Rivers & Harbors Act permit	<u> X </u>	(ACOE)
CWA § 404 permit	<u> X </u>	(ACOE)
Other _____ (please specify)		
None required	_____	

DPC = Delta Protection Commission
 CWA = Clean Water Act
 CESA = California Endangered Species Act
 USFWS = U.S. Fish and Wildlife Service
 ACOE = U.S. Army Corps of Engineers

ESA = Endangered Species Act
 CDFG = California Department of Fish and Game
 RWQCB = Regional Water Quality Control Board
 BCDC = Bay Conservation and Development Comm.

Land Use Checklist

All applicants must fill out this Land Use Checklist for their proposal. Applications must contain answers to the following questions to be responsive and to be considered for funding. Failure to answer these questions and include them with the application will result in the application being considered nonresponsive and not considered for funding.

1. Do the actions in the proposal involve physical changes to the land (i.e. grading, planting vegetation, or breaching levees) or restrictions in land use (i.e. conservation easement or placement of land in a wildlife refuge)?

X
YES

NO

2. If NO to # 1, explain what type of actions are involved in the proposal (i.e., research only, planning only).

3. If YES to # 1, what is the proposed land use change or restriction under the proposal?
Levee breaching and reconstruction and raising and widening.
Also landscaping.

4. If YES to # 1, is the land currently under a Williamson Act contract?

YES

X
NO

5. If YES to # 1, answer the following:

Current land use

Current zoning

Current general plan designation

6. If YES to #1, is the land classified as Prime Farmland, Farmland of Statewide Importance or Unique Farmland on the Department of Conservation Important Farmland Maps?

YES

X
NO

DON'T KNOW

7. If YES to # 1, how many acres of land will be subject to physical change or land use restrictions under the proposal?

8. If YES to # 1, is the property currently being commercially farmed or grazed?

YES

X
NO

9. If YES to #8, what are

the number of employees/acre _____

the total number of employees _____

10. Will the applicant acquire any interest in land under the proposal (fee title or a conservation easement)?

 X
YES

NO

11. What entity/organization will hold the interest? City of Sacramento

12. If YES to # 10, answer the following:

Total number of acres to be acquired under proposal

 1.1

Number of acres to be acquired in fee

 1.1

Number of acres to be subject to conservation easement

13. For all proposals involving physical changes to the land or restriction in land use, describe what entity or organization will:

manage the property

City of Sacramento

provide operations and maintenance services

City of Sacramento

conduct monitoring

City of Sacramento

14. For land acquisitions (fee title or easements), will existing water rights also be acquired?

YES

 X
NO

15. Does the applicant propose any modifications to the water right or change in the delivery of the water?

 X
YES

NO

16. If YES to # 15, describe Change in location at point of diversion

Executive Summary

Project Title: Construction of City of Sacramento Intake Fish Screen Replacement Project

Amount Requested: \$6,020,995

\$4,685,600 for Sacramento River WTP Replacement Intake and
\$1,335,395 for E A Fairbairn WTP Intake Modification

Applicant: City of Sacramento, Department of Utilities
1395 - 35th Avenue, Sacramento, CA 95822

Gary E Gosse, Project Manager
Phone: (916) 264-1426
Fax: (916) 264-1497
E-mail: ggosse@gw.cityofsacramento.org

Summary Description: The City of Sacramento is undertaking a project to replace the fish screens on municipal water supply intakes on the Sacramento River (Sacramento River Water Treatment Plant) and the American River (E A Fairbairn Water Treatment Plant). The fish screens on the existing intakes do not meet current criteria of the California Department of Fish and Game or the National Marine Fisheries Service with respect size of screen openings and approach velocity as well as means and frequency of cleaning.

The fish screen replacement project will involve constructing a replacement intake and access bridge for the Sacramento River Water Treatment Plant and modifying the intake at the E A Fairbairn Water Treatment Plant. Replacement of the fish screens at the City's two raw water intakes will benefit CALFED priority species of chinook salmon, steelhead trout, and Sacramento splittail.

CONSTRUCTION of CITY of SACRAMENTO WATER INTAKE FISH SCREEN REPLACEMENT PROJECT

Project Description

The water supply for the City of Sacramento consists of treated surface water (85 percent) from two water treatment plants and groundwater from wells 15 percent). The two treatment plants are the Sacramento River Water Treatment Plant (Sacramento River WTP) with a diversion from the Sacramento River and the E A Fairbairn Water Treatment Plant (Fairbairn WTP) with an American River diversion.

The fish screen replacement project will involve constructing a replacement intake and access bridge for the Sacramento River WTP and modifying the intake at the E A Fairbairn WTP. The existing intake pier at the Sacramento River WTP does not lend itself to be retrofitted with new fish screens and still maintain anywhere near the needed 160 mgd diversion capacity. The existing intake pump station at the Fairbairn WTP will be modified by replacing the existing fish screens with new screens and constructing an extension to the intake to accommodate three additional pumps with associated fish screens.

A replacement intake and vehicle access bridge for the Sacramento River WTP is to be constructed at a location approximately 750 feet downstream of the existing intake pier (1950 feet downstream of the American River confluence). The diversion capacity of the new intake for the Sacramento River WTP is to be 160 mgd, equal to the diversion capacity of the existing intake. The new intake will be an elongated pier type structure with a vehicle access bridge extending from the intake to the nearby easterly levee of the Sacramento River. The replacement will be constructed with two open pump bays each containing four pumps and eight screens. One pump out of the total of eight pumps is to be a standby pump for reliability. The fish screen material is to be stainless steel wedgewire with 1.75 millimeter (mm) size openings.

The modification of the intake pump station at the Fairbairn WTP consists of replacing the twelve existing fish screens (two for each of six pumps) with new screens. The modification project also includes extending the length of the intake to accommodate six additional fish screens three more pumps. A larger total fish screen area is needed to maintain the same 200 mgd diversion capacity of the existing intake structure as originally designed. The additional screen area is needed since the 1.75 mm openings in the new wedgewire screens is significantly smaller than the existing 3/8-inch diameter opening size in the existing screens.

Background Information

The Sacramento River WTP is located near the Sacramento River, east of Interstate 5 freeway and south of Richards Boulevard. The existing intake pier is situated in the Sacramento River approximately 1200 feet downstream of the confluence of the American and Sacramento Rivers. The Fairbairn WTP is located adjacent to the American River,

immediately adjacent to and upstream of the California State University, Sacramento campus.

The Sacramento River WTP and intake pier was designed and constructed in the early 1920s and placed into operation in 1924. The existing intake pier has five screened openings at four different levels (elevations) for drawing in raw Sacramento River water. Two of the openings are above river level approximately 80 percent of the time. The diversion capacity of the intake pier in combination with a pump station located within the treatment plant site is 160 million gallons per day (mgd) or 248 cubic feet per second (cfs).

The existing intake pier was designed and constructed prior to the establishment of fish screen standards, thus is not in compliance with current fish screen design criteria. The fish screen material over the existing openings consists of 3/4-inch wire mesh. No facilities for automatic cleaning of the fish screens are available.

The Fairbairn WTP and intake pump station was designed and constructed in the early 1960s and placed into operation in 1964. The existing intake consists of six pump bays and 12 fish screens (six on each side or two per pump). The existing intake structure and fish screens were originally designed to accommodate a 200 mgd or 310 cfs diversion from the American River. The existing fish screens are stainless steel plates perforated with 3/8-inch diameter drilled holes on one-half inch staggered centers. The fish screen material on the existing intake pump station met the standards and criteria of the day when put into service in 1964 but is out of compliance with current standards.

Conceptual Model

1. Problem: Fish Screens On Existing Water Intakes At Sacramento River WTP And E A Fairbairn WTP Do Not Meet Current Standards
2. Project Approach: Begin With Engineering Feasibility Studies And Prepare And Environmental Assessment For Projects At Both City Water Intakes To Replace Existing Fish Screens With New Screens That Will Meet Current Standards (Partially funded by a \$225,000 CVPIA AFSP grant, 7-FG-20-14960)
 - * For Sacramento River WTP Replacement Intake, Prepare Design / Development Report to Integrate Engineering Study Results with Selected Architectural Design Concept (Partially funded by a \$654,500 CALFED grant, 98-B1016)
 - * For Fairbairn WTP Intake Modification, Utilize Results of Engineering Feasibility and Develop an Architectural Design to Enhance Appearance of Modified Intake
 - Perform Public Outreach to Solicit Design Input on Both Water Intake Fish Screen Replacement Projects

- Work With Bureau of Reclamation, U S Fish and Wildlife Service, and National Marine Fisheries Service to Obtain Agreement on Terms and Conditions of Biological Opinions
3. Perform Final Engineering And Architectural Design Of Intake Fish Screen Replacement Projects At Both Treatment Plants
 - * Prepare Plans, Specifications, and Construction Cost Estimate for Sacramento River WTP Replacement Intake (90 percent designed as of April 2000) and for Fairbairn WTP Intake Modification (60 percent designed as of April 2000)
 - Apply for Various Permits from Regulatory Agencies
 - Finalize and Certify Environmental Assessment and Mitigation Monitoring and Reporting Plan
 - Obtain Permits and Incorporate Into Contract Specifications
 4. Advertise And Receive Bids And Award Construction Contracts For Intake Fish Screen Replacement Project At Sacramento River WTP And Intake Modification Project At Fairbairn WTP
 5. Begin Construction Of Intake Fish Screen Replacement Projects

Proposed Scope of Work

Location: The intake fish screen replacement project for the City of Sacramento consists of the design and construction of a replacement intake for the Sacramento River WTP (Project 1) and the modification of the intake at the Fairbairn WTP (Project 2). The intake for the Sacramento River WTP is located in Sacramento County situate in the Sacramento River approximately 1950 feet downstream from the confluence of the American River. The Sacramento River WTP is located ease of Interstate 5 freeway adjacent to and north of the Union Pacific Railyards.

The intake for the Fairbairn WTP is located in the American River downstream of the Howe Avenue Bridge but upstream of the Guy West Bridge. The Fairbairn WTP is located in Sacramento County and is adjacent to and east of the campus of California State University, Sacramento.

The new intake for the Sacramento River WTP will be located within Section 35 of T9N, R4E and within Sacramento County assessor's parcel numbers 001-0190-006, 001-0190-009, and 001-0190-010. The existing intake at the Fairbairn WTP is located within Section 10 of T8N, R5E and within Sacramento County assessor's parcel numbers 005-0010-010, 005-0010-011, and 005-0010-012.

Monitoring and Assessment

A "Post-Construction Evaluation and Assessment Plan" as well as a "Long-Term Operation and Maintenance Plan" for each intake fish screen replacement project will be prepared in fulfillment of a pending CVPIA Anadromous Fish Screen Program grant agreement. This is to insure that upon completion of construction, the replacement fish screens function as intended and meet the criteria of the California Department of Fish and Game and the National Marine Fisheries Service.

Project Schedule

It is anticipated the intake fish screen projects will be advertised for bids in the fall of 2000 with construction beginning on both the Sacramento River WTP Replacement Intake and the Fairbairn WTP Intake Modification in the Spring of 2001. Construction of the Sacramento River replacement intake is expected to take 30 months to complete and construction of the Fairbairn intake modification will likely take 16 to 18 months to complete.

The final Environmental Assessment / Initial Study - Findings of No Significant Impact / Mitigated Negative Declaration for the fish screen replacement project is expected to be completed and certified by August 2000.

Expected Benefits

Implementation of the proposed fish screen replacement project at both the Sacramento River and Fairbairn WTPs will provide a significant benefit to aquatic resources in both the lower American and Sacramento rivers. Particularly for juvenile fish such as all four (Fall and late Fall, Winter, and Spring) runs of chinook salmon, steelhead trout, Sacramento splittail, and green sturgeon. The aquatic benefits will be realized as soon as construction of the fish screen replacement projects are complete, and will continue to be realized over the life of the project. The reduced approach velocities and smaller screen opening size of the new screens will significantly reduce the number of fish potentially adversely impacted by the year round operation of the City of Sacramento's two water intake structures.

Another benefit of the Sacramento River WTP replacement intake project will be a reduced risk of flooding. The two raw water pipelines from the existing intake pier for the Sacramento River WTP are located beneath the existing levee and below the 100-year flood level. The proposed Sacramento River WTP replacement intake project will reduce the risk of possible flooding of Sacramento as the two raw water pipelines from the new intake cross the Sacramento River levee above the 100-year flood level.

Implementation of fish screening projects such as described in this proposal will meet one of the twelve areas under the Ecosystem Restoration Projects and Programs being pursued as part of the CALFED BAY-DELTA PROGRAM.

Costs

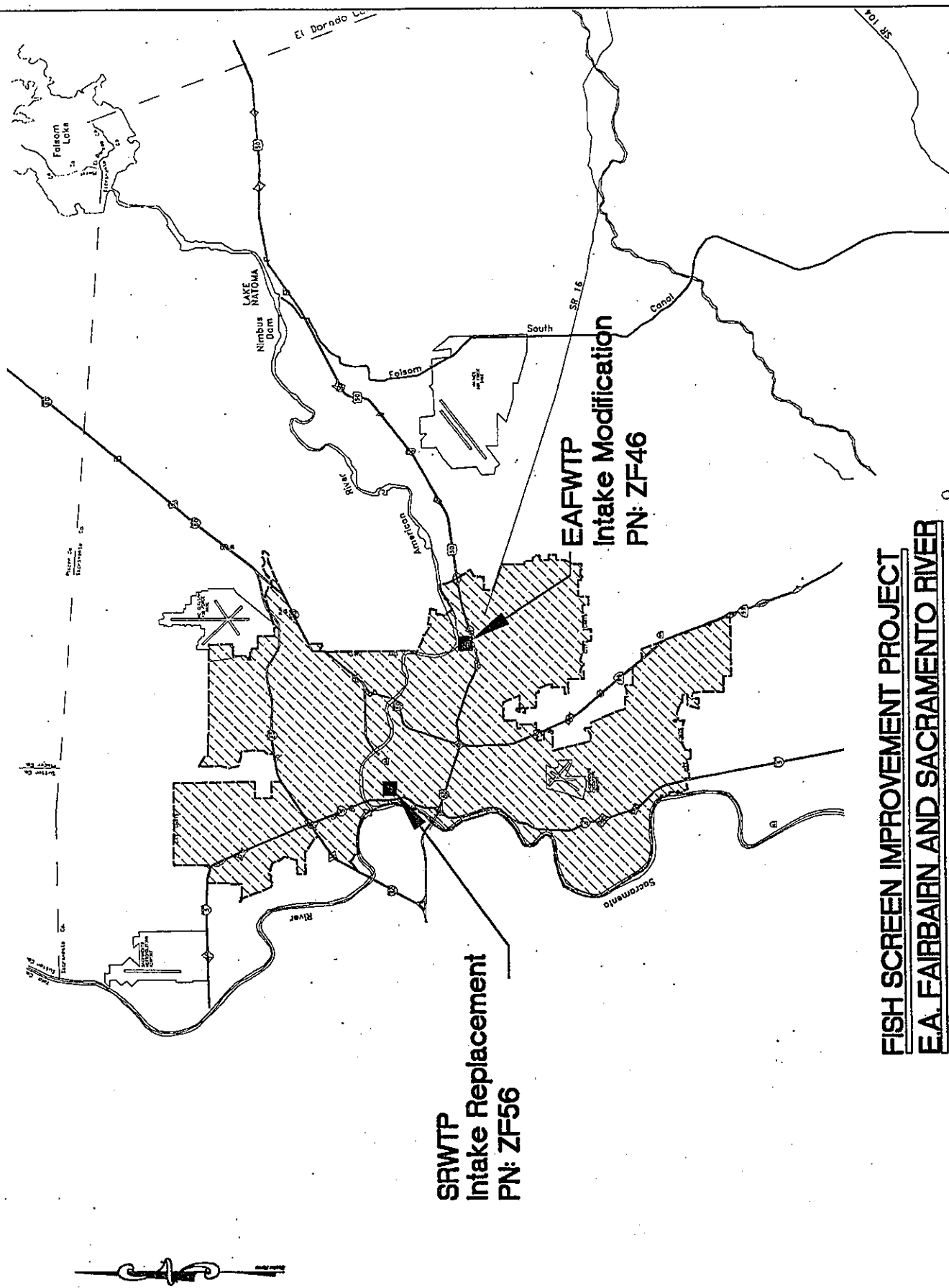
The anticipated construction cost of the Sacramento River WTP Replacement Intake (Project 1) and the Fairbairn WTP Intake Modification (Project 2) are \$26 million and \$12 million respectively. Adding administrative, legal, land acquisition, engineering support, and inspection costs to the cost for construction brings the costs of the two individual fish screen replacement projects to:

1. \$32,990,000 for Sacramento River WTP Replacement Intake (Project 1)
2. \$14,230,000 for E A Fairbairn WTP Intake Modification (Project 2)

A cost breakdown of the two intake fish screen replacement projects is presented on the following table as well as on Standard Form 424 included in this proposal.

Proposed Construction Funding - Intake Fish Screen Replacement Projects

Year	Project	City of Sacramento	CUPIA AFSP	CALFED	Total Cost
Year 1	1	\$10,083,200	\$4,069,000	\$2,342,800	\$16,495,000
	2	4,988,740	1,458,562	667,697	7,114,999
Total Year 1		\$15,071,940	\$5,527,562	\$3,080,497	\$23,609,999
Year 2	1	\$10,083,200	\$4,069,000	\$2,342,800	\$16,495,000
	2	4,988,740	1,458,563	667,698	7,115,001
Total Year 2		\$15,071,940	\$5,527,563	\$3,010,498	23,610,001
TOTAL COST = \$47,220,000					



SRWTP
Intake Replacement
PN: ZF56

EAFWTP
Intake Modification
PN: ZF46

FISH SCREEN IMPROVEMENT PROJECT
E.A. FAIRBAIRN AND SACRAMENTO RIVER
WATER TREATMENT PLANTS

Applicant Qualifications

Staff of the City of Sacramento Department of Utilities operate and maintain the City's two water treatment plants (Sacramento River WTP and Fairbairn WTP) as well as 29 water production wells and ten water storage tanks. The Department staff has years of experience and participation in the design and construction of many improvements to these facilities.

The City of Sacramento has demonstrated local leadership and commitment to community-based planning. The City was the co-founder of the Sacramento Area Water Forum (Water Forum), and together with the County of Sacramento, has been the sponsor for Water Forum efforts. The City has also supported the Water Forum financially, contributing six million dollars to the Water Forum effort. The ERPP describes the previous efforts of the Water Forum. As noted in the ERPP (Volume II, Page 297), the Water Forum has identified important elements that will contribute to improving the ecological health of the lower American River (LAR) including adoption of AFRP flows on the LAR, habitat mitigation, changes in operations of the water release shutters at the power penstocks of Folsom Dam, management actions to improve water temperatures in the LAR in summer and fall, and a series of fishery studies and pilot projects to determine what additional actions will need to be taken to help restore LAR chinook salmon and steelhead populations. The City's co-sponsorship of the Water Forum is evidence of their capability and qualifications to successfully implement and oversee the proposed project. The City will oversee the design and construction of the intake fish screen replacement project.

Key Personnel

Jim Sequeira (City of Sacramento) is the Director of Utilities for the City of Sacramento, responsible for the overall operation, maintenance, and planning associated with the City's water, sewer, drainage, and flood control functions. Mr. Sequeira acts as the City's liaison for many water and natural resource related programs, including the Sacramento Area Water Forum. Mr. Sequeira holds a Bachelor of Science degree in Biological Sciences and a Masters of Science in Civil Engineering. Previously, he was the City's Water Division Manager overseeing the administration, operation, and maintenance of three large water treatment facilities, seven distribution reservoirs, 60 wells, and over 1,300 miles of underground water mains.

Gary E. Gosse (City of Sacramento) is a Supervising Engineer with the City of Sacramento Department of Utilities. He has been with the City for the past 31 years, with the last 13 years spent with the Department of Utilities and the previous 18 years with the Public Works Department. Mr. Gosse holds a Bachelor of Science degree in Civil Engineering from the University of Arizona (1967) and a Masters of Science degree in Civil Engineering from California State University, Sacramento (1976).

Compliance with Standard Terms and Conditions

The standard terms and conditions are agreeable, and the City of Sacramento will be in compliance with the terms and conditions. Requested forms are attached.

Literature Cited

CALFED Category III proposal, "City of Sacramento Fish Screen Replacement Project Phase 2" (Proposal No. 98-B1016), dated July 2, 1998 prepared by Surface Water Resources, Inc

City of Sacramento Fish Screen Replacement Project Environmental Assessment / Initial Study, Public Review Draft, dated February 1999 prepared by Surface Water Resources, Inc.

NONDISCRIMINATION COMPLIANCE STATEMENT

STD. 19 (REV. 3-95) FMC

COMPANY NAME

CITY OF SACRAMENTO

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age, marital status, denial of family and medical care leave and denial of pregnancy disability leave.

CERTIFICATION

I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.

OFFICIAL'S NAME

James G. Sequeira

DATE EXECUTED

May 12, 2000

EXECUTED IN THE COUNTY OF

Sacramento

PROSPECTIVE CONTRACTOR'S SIGNATURE

PROSPECTIVE CONTRACTOR'S TITLE


Director of Utilities

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME

City of Sacramento

APPLICATION FOR FEDERAL ASSISTANCE

OMB Approval No. 0348-0043

1. TYPE OF SUBMISSION: Application <input checked="" type="checkbox"/> Construction <input type="checkbox"/> Non-Construction Preapplication <input type="checkbox"/> Construction <input type="checkbox"/> Non-Construction		2. DATE SUBMITTED May 12, 2000	Applicant Identifier N/A
		3. DATE RECEIVED BY STATE N/A	State Application Identifier N/A
		4. DATE RECEIVED BY FEDERAL AGENCY	Federal Identifier
5. APPLICANT INFORMATION			
Legal Name: City of Sacramento		Organizational Unit: Department of Utilities	
Address (give city, county, State, and zip code): 1395 35th Avenue Sacramento CA 95822		Name and telephone number of person to be contacted on matters involving this application (give area code) Gary E. Gosse, (916)264-1426	
6. EMPLOYER IDENTIFICATION NUMBER (EIN): 94-6000410		7. TYPE OF APPLICANT: (enter appropriate letter in box) <div style="text-align: right; border: 1px solid black; padding: 2px; float: right;">C</div> <div style="clear: both;"></div> A. State B. County C. Municipal D. Township E. Interstate F. Intermunicipal G. Special District H. Independent School Dist. I. State Controlled Institution of Higher Learning J. Private University K. Indian Tribe L. Individual M. Profit Organization N. Other (Specify) _____	
8. TYPE OF APPLICATION: <div style="text-align: center;"> <input type="checkbox"/> New <input checked="" type="checkbox"/> Continuation <input type="checkbox"/> Revision </div> If Revision, enter appropriate letter(s) in box(es) <input type="checkbox"/> <input type="checkbox"/> A. Increase Award B. Decrease Award C. Increase Duration D. Decrease Duration Other(specify): _____		9. NAME OF FEDERAL AGENCY: Dept. of the Interior, Bureau of Reclamation US Fish & Wildlife Svc.	
10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: <div style="text-align: center;"> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> - <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> </div> TITLE: N/A		11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: Construction of Replacement Intake at Sacramento River Water Treatment Plant and Intake Modification at E.A. Fairbairn Water Treatment Plant on the American River	
12. AREAS AFFECTED BY PROJECT (Cities, Counties, States, etc.): City of Sacramento			
13. PROPOSED PROJECT Fish Screen		14. CONGRESSIONAL DISTRICTS OF: Robert T. Matsui (District 5)	
Start Date 1/1/00	Ending Date 5/1/03	a. Applicant City of Sacramento	
		b. Project	
15. ESTIMATED FUNDING:		16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?	
a. Federal	\$ 11,055,125.00	a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE _____	
b. Applicant	\$ 30,143,880.00	b. No. <input type="checkbox"/> PROGRAM IS NOT COVERED BY E. O. 12372 <input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW	
c. State	\$.00		
d. Local	\$.00		
e. Other CalFed	\$ 6,020,995.00		
f. Program Income	\$.00		
g. TOTAL	\$ 47,220,000.00	17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT? <input type="checkbox"/> Yes If "Yes," attach an explanation. <input checked="" type="checkbox"/> No	
18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.			
a. Type Name of Authorized Representative Gary E. Gosse		b. Title Supervising Engineer	c. Telephone Number (916)264-1426
d. Signature of Authorized Representative 		e. Date Signed May 12, 2000	

11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT (Feb 29, 2000)

Construction of a Replacement Intake at the Sacramento River Water Treatment Plant

Summary Description

The Sacramento River Water Treatment Plant (Sacramento River WTP) is located east of Interstate 5 and south of Richards Boulevard at 101 Bercut Drive in the City of Sacramento. The existing intake pier for the Sacramento River WTP is situated in the Sacramento River some 175 feet out from the easterly levee. The existing intake and its walkway access bridge is located just north of the former Pacific Gas and Electric generating plant and is approximately 1200 feet downstream (south) of the confluence of the American River with the Sacramento River. The fish screens on the existing intake do not meet current standards of the California Department of Fish and Game nor that of the National Marine Fisheries Service.

A replacement intake and vehicle access bridge for the Sacramento River WTP is to be constructed at a location approximately 750 feet downstream of the existing intake pier (1950 feet downstream of the American River confluence). The diversion capacity of the new intake will be 160 million gallons per day (mgd), equal to the capacity of the existing intake. The fish screens for the replacement intake will be designed to meet the current standards and criteria established by the California Department of Fish and Game and the National Marine Fisheries Service.

The replacement intake will be an elongated pier type structure with a vehicle access bridge extending from the intake to the nearby easterly levee of the Sacramento River. The new intake will consist of a substructure, two operating floor levels above the substructure, and an enclosure building. The replacement intake will be situated out in the Sacramento River approximately 270 feet from the easterly levee.

The substructure will be approximately 36 feet in width and 210 feet in length (upstream nose and to downstream tail). A series of eight submerged rectangular screened openings will extend along each side of the intake structure. The fish screens at the openings will be sized to allow the desired quantity of raw water to pass through the screens without entraining fish on the screens and without exceeding a design approach velocity of 0.2 feet per second.

The intake will be configured with two separate pump bays with each pump bay designed to accommodate four 22.8 mgd pumps for a total of eight pumps. With one pump as standby, the reliable capacity of the replacement intake will be 160 mgd. With the exception of the

enclosure building, the intake will be constructed of cast-in-place reinforced concrete.

The City of Sacramento is nearly complete with the engineering design and preparation of plans, specifications, and cost estimate for the replacement intake and access bridge for the Sacramento River WTP. This application is for additional CVPIA Anadromous Fish Screen Program funds to cost share with the City for the construction of the Sacramento River WTP Replacement Intake project. City funds will be used to supplement additional funds awarded to the City from the CVPIA Anadromous Fish Screen Program.

Select statistics for the existing Sacramento River WTP are:

- 158 mgd - Total pumping capacity (low-lift pumps)
- 110 mgd - Estimated reliable treatment plant capacity
- 14.5 mg - Reservoir storage capacity
- 200 mgd - Total pumping capacity (high-lift pumps)

The Sacramento River WTP including the existing intake pier began operating in 1924.

11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT (Feb 29, 2000)

Construction of Modification (Fish Screen Replacement) of Intake Pump Station at the E A Fairbairn Water Treatment Plant

Summary Description

The E A Fairbairn Water Treatment Plant (Fairbairn WTP) is located at 7501 College Town Drive along the American River easterly of and adjacent to the campus of California State University, Sacramento. The intake pump station is situated out in the American River approximately 80 feet from the left (south) river bank (400 feet from the levee) and some 2000 feet downstream from the Howe Avenue bridge.

A concrete box girder vehicle access bridge extends from the existing intake pump station to the American River levee and the water treatment plant. The four cell box girder bridge conveys by gravity pumped water from the intake to a grit basin on the treatment plant site. The access bridge also provides maintenance access to the intake pump station. Presently water diverted and pumped by the existing intake is conveyed to the treatment plant through only the two easterly cells of the intake bridge.

The existing Fairbairn WTP intake is equipped with six pumps with capacities ranging from 10 to 32 million gallons per day (mgd). Pump tests conducted in the early 1990's indicate the hydraulic pumping capacity of the existing intake pump station is 128 mgd.

Intake fish screens are located on each side of the intake structure, with two screens serving each of the six pumps. The existing fish screens consist of 5/16-inch thick stainless steel plates 12 feet in height and 6 feet in width. The plate screens are perforated with 3/8-inch diameter drilled holes on 1/2-inch staggered centers. The existing screens do not meet current standards established by the California Department of Fish and Game and the National Marine Fisheries Service.

The Fairbairn WTP intake is to be modified by replacing the existing fish screens and adding new screens in order to comply with present day criteria of the California Department of Fish and Game and National Marine Fisheries Service. The intake is to be extended to accommodate three additional pumps and six additional fish screens to supplement the six existing pump bays and twelve replacement fish screens. The intake extension for the three additional pumps would be an open bay configuration.

The near term configuration of the modified intake will consist of the six existing pumps with the three largest pumps relocated to the intake extension. With largest (32 mgd) pump as standby, the reliable capacity of the near term modified intake will be 171 mgd.

The planned ultimate configuration of the modified intake will consist of three 34 mgd and six 22 mgd pumps, With one 34 mgd pump as standby, the modified intake is to be restored to its original design capacity of 200 mgd. Water diverted by the three pumps in the extended portion of the intake would flow by gravity to the treatment plant through the two westerly cells of the existing box girder intake access bridge.

The City of Sacramento is nearly complete with the engineering design and preparation of plans, specifications, and cost estimate for the intake modification project for the E A Fairbairn WTP. This application is for additional CVPIA Anadromous Fish Screen Program funds to cost share with the City for the construction of the E A Fairbairn WTP Intake Modification project. City funds will be used to supplement additional funds awarded to the City from the CVPIA Anadromous Fish Screen Program.

Select statistics for the existing Fairbairn WTP are:

- 137 mgd - Total pumping capacity (low-lift pumps)

- 90 mgd - Estimated reliable treatment plant capacity

- 18 mg - Reservoir storage capacity

- 151 mgd - Total pumping capacity (high-lift pumps)

The E A Fairbairn Water Treatment Plant began operating in 1964.

INTAKE MODIFICATIONS FOR SACRAMENTO RIVER WTP

OMB Approval No. 0348-0047

BUDGET INFORMATION - Construction Programs

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case, you will be notified.

COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Columns a-b)
1. Administrative and legal expenses	\$ 500,000 .00	.00	\$ 500,000 .00
2. Land, structures, rights-of-way, appraisals, etc.	\$ 2,000,000 .00	2,000,000 .00	.00
3. Relocation expenses and payments	\$ 200,000 .00	.00	\$ 200,000 .00
4. Architectural and engineering fees	\$ 130,000 .00	.00	\$ 130,000 .00
5. Other architectural and engineering fees	\$ 520,000 .00	.00	\$ 520,000 .00
6. Project inspection fees	\$ 1,040,000 .00	.00	\$ 1,040,000 .00
7. Site work	\$ 4,500,000 .00	550,000 .00	\$ 3,950,000 .00
8. Demolition and removal	\$ 250,000 .00	.00	\$ 250,000 .00
9. Construction	\$ 8,500,000 .00	1,000,000 .00	\$ 7,500,000 .00
10. Equipment	\$ 5,000,000 .00	.00	\$ 5,000,000 .00
11. Miscellaneous	\$ 7,750,000 .00	.00	\$ 7,750,000 .00
12. SUBTOTAL (sum of lines 1-11)	\$ 30,390,000 .00	3,550,000 .00	\$ 26,840,000 .00
13. Contingencies	\$ 2,600,000 .00	155,000 .00	\$ 2,445,000 .00
14. SUBTOTAL	\$ 32,990,000 .00	3,705,000 .00	\$ 29,285,000 .00
15. Project (program) income	\$ NONE .00	NONE .00	\$ NONE .00
16. TOTAL PROJECT COSTS (subtract #15 from #14)	\$ 32,990,000 .00	3,705,000 .00	\$ 29,285,000 .00

FEDERAL FUNDING

17. Federal assistance requested, calculate as follows:
(Consult Federal agency for Federal percentage share.)
Enter the resulting Federal share.

Enter eligible costs from line 16c Multiply X 27.8 %

\$ 8,138,000 .00

BUDGET INFORMATION - Construction Programs

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case, you will be notified.

COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Columns a-b)
1. Administrative and legal expenses	\$ 250,000.00	\$.00	\$ 250,000.00
2. Land, structures, rights-of-way, appraisals, etc.	\$ NONE	\$.00	\$ NONE
3. Relocation expenses and payments	\$ NONE	\$.00	\$ NONE
4. Architectural and engineering fees	\$ 60,000.00	\$.00	\$ 60,000.00
5. Other architectural and engineering fees	\$ 240,000.00	\$.00	\$ 240,000.00
6. Project inspection fees	\$ 480,000.00	\$.00	\$ 480,000.00
7. Site work	\$ 1,500,000.00	\$.00	\$ 1,500,000.00
8. Demolition and removal	\$ 200,000.00	\$.00	\$ 200,000.00
9. Construction	\$ 3,600,000.00	\$.00	\$ 3,600,000.00
10. Equipment	\$ 3,200,000.00	\$.00	\$ 3,200,000.00
11. Miscellaneous	\$ 3,500,000.00	\$ 1,150,000.00	\$ 2,350,000.00
12. SUBTOTAL (sum of lines 1-11)	\$ 13,030,000.00	\$ 1,150,000.00	\$ 11,880,000.00
13. Contingencies	\$ 1,200,000.00	\$ 115,000.00	\$ 1,085,000.00
14. SUBTOTAL	\$ 14,230,000.00	\$ 1,265,000.00	\$ 12,965,000.00
15. Project (program) income	\$ NONE	\$ NONE	\$ NONE
16. TOTAL PROJECT COSTS (subtract #15 from #14)	\$ 14,230,000.00	\$ 1,265,000.00	\$ 12,965,000.00
FEDERAL FUNDING			
17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share.) Enter the resulting Federal share.	Enter eligible costs from line 16c. Multiply X 22.5 %		
		\$	\$ 2,917,125.00

ASSURANCES - CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0042), Washington, DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the Awarding Agency. Further, certain Federal assistance awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will not dispose of, modify the use of, or change the terms of the real property title, or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal interest in the title of real property in accordance with awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure non-discrimination during the useful life of the project.
4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progress reports and such other information as may be required by the assistance awarding agency or State.
6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
10. Will comply with all Federal statutes relating to non-discrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681 1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
12. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333) regarding labor standards for federally-assisted construction subagreements.
14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the

National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).

16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
19. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL

Gary Z. Grosse

TITLE

Supervising Engineer

APPLICANT ORGANIZATION

City of Sacramento

DATE SUBMITTED

May 12, 2000